

IN THE CLAIMS:

1. (Currently Amended) A compact banknote dispensing device, comprising:

a banknote supply storing section for storing one or more banknotes;

a banknote transporting unit for transporting a stored banknote, the banknote transporting unit being adjacent to the banknote supply storing section for receiving a stored
5 banknote from the banknote supply storing section,

wherein the banknote transporting unit includes a U-shaped transporting path including a first roller, a guiding roller and a second transporting roller, the first roller being adjacent to the banknote supply storing section, the guiding roller being adjacent the first roller to receive the banknote on a side opposite to the side of the first roller, the second roller being
10 disposed on the side of the first roller on a side opposite to the guiding roller to enable the transported banknote to traverse a U-shaped path around the first roller, the guiding roller, and the second roller;

a banknote length sensor unit located within the banknote transporting unit adjacent to the U-shaped transporting path for detecting a length of transported banknotes; and

15 a dispensing slot for dispensing the transported banknotes,

wherein the banknote length sensor unit is adjacent to the U-shaped transporting path, the banknote length sensor comprising a first banknote sensor and a second banknote sensor, the first banknote sensor being adjacent to the first roller to detect the banknote as it is received by the first roller, the second banknote sensor being disposed between the guiding roller
20 and the second roller so that the first sensor and the second sensor are spaced at a distance along the U-shaped transporting path that is less than the length of the shortest valid banknote,

wherein the banknote supply storing section is inclined at an angle to permit the stored banknotes to be stored in a more compact longitudinal distance and to facilitate discharging of banknotes in a downward direction.

2.-5. (Cancelled)

6. (Currently Amended) The compact banknote dispensing device of Claim [[20]] 1, further comprising:

a first sensor for detecting the presence of a banknote received by the banknote transporting unit, the first sensor outputting a first signal to indicate the presence of the banknote
5 adjacent to the first sensor;

a second sensor for detecting the presence of a banknote discharged by the banknote transporting unit, the second sensor outputting a second signal to indicate the presence of the banknote adjacent to the second sensor; and

a control unit for receiving and processing the first signal and the second signal,
10 the control unit comparing the first signal with the second signal to determine whether a banknote has successfully passed through the banknote transporting unit.

7. (Original) The compact banknote dispensing device of Claim 6, further comprising:

a temporary storing section for receiving a predetermined number of discharged banknotes, the temporary storing section being arranged adjacent to the banknote transporting
5 unit,

wherein the second sensor is interposed between the banknote transporting unit and the temporary storing section to detect the passage of the discharged banknote into the temporary storing section.

8. (Original) The compact banknote dispensing device of Claim 7, further comprising:

a dispensing slot for dispensing a predetermined number of discharged banknotes;

and

5 a slider member for pushing a predetermined number of discharged banknotes in the temporary storing section out of the temporary storing section to the dispensing slot so that the predetermined number of discharged banknotes protrude out of the dispensing slot.

9. (Original) The compact banknote dispensing device of Claim 7,
wherein the predetermined number of discharged banknotes is four.

10. (Original) The compact banknote dispensing device of Claim 7,
wherein the predetermined number of discharged banknotes is nine.

11. (Original) The compact banknote dispensing device of Claim 8, further comprising:

a third sensor for detecting the presence of a one or more dispensed banknotes ,
the third sensor outputting a third signal to indicate the presence of one or more banknotes
5 adjacent to the third sensor, the third sensor being adjacent to the dispensing slot to detect the presence of one or more dispensed banknotes protruding out of the dispensing slot; and

an alarm emitter for emitting an audible alarm to indicate an error condition,

wherein the third signal is asserted to the control unit to enable the control unit to determine if the dispensed banknotes have been taken by a user, the control unit determining if
10 the banknotes have not been taken by a user for a predetermined amount of time indicates an error condition.

12. (Original) The compact banknote dispensing device of Claim 11,
wherein the first sensor, the second sensor, and the third sensor are a transmitting photoelectric sensor, a reflecting photoelectric sensor or mechanical sensor.

13. (Cancelled)

14. (Currently Amended) The compact banknote dispensing device of Claim [[13]]
21, further comprising:

a fifth sensor for detecting the presence of a banknote adjacent the fifth sensor,
the fifth sensor outputting a fifth signal to indicate successful passage of the received banknote to
5 the rejected banknote storing section.

15. (Currently Amended) The compact banknote dispensing device of Claim [[13]] 1,
wherein the banknote storing section and the rejected banknote storing section
comprise a removable safe unit.

16. (Original) The compact banknote dispensing device of Claim 14,
wherein the fourth sensor and the fifth sensor are a transmitting photoelectric
sensor, a reflecting photoelectric sensor, or mechanical sensor.

17. (Currently Amended) The compact banknote dispensing device of Claim [[20]]
21,

wherein the first signal is detecting while the fourth signal becomes detecting
after which the first signal becomes non-detecting, the control unit measuring the time difference
5 from the fourth sensor detecting and the first sensor non-detecting in order to measure the length
of the discharged banknote.

18. (Currently Amended) The compact banknote dispensing device of Claim [[20]] 1,
wherein the number of radial projections protruding from the peripheral surface of
each of the first roller and the first pressing roller is six.

19. (Cancelled)

20. (Currently Amended) A compact banknote dispensing device, comprising:
a banknote supply storing section for storing one or more banknotes;
a banknote discharging unit for discharging a banknote from the banknote supply
storing section at a first predetermined speed, the banknote discharging unit being adjacent to the
5 banknote supply storing section;

a banknote transporting unit for receiving a discharged banknote from the
banknote discharging unit and transporting the discharged banknote at a second predetermined
speed from the banknote supply storing section, the second predetermined speed being faster
than the first predetermined speed,

10 wherein the banknote transporting unit includes a first roller and a first pressing
roller disposed adjacent to the banknote supply storing section, the first roller and the first

pressing roller rotating oppositely and being arranged so their axes of rotation are parallel to each other to conduct a discharged banknote between the first roller and the first pressing roller in a direction away from the banknote discharging unit, the first roller and first pressing roller having multiple radial projections on the peripheral surface of each roller with one or more intermediate radial projection free portions, the radial projections on the first roller being interposed with the radial projections of the first pressing roller to enable the first roller and the first pressing roller to retain and conduct a discharged banknote in a wave-like manner;

a rejected banknote storing section adjacent to the banknote transporting unit;

a diverting unit for diverting a banknote from a first path to a second path, the first path being the normal banknote discharge path, the second path being the rejected banknote storage path; and

a first sensor for detecting the presence of a banknote received by the banknote transporting unit, the first sensor outputting a first signal to indicate the presence of the banknote adjacent to the first sensor;

a second sensor for detecting the presence of a banknote discharged by the banknote transporting unit, the second sensor outputting a second signal to indicate the presence of the banknote adjacent to the second sensor;

a control unit for receiving and processing the first signal and the second signal, the control unit comparing the first signal with the second signal to determine whether a banknote has successfully passed through the banknote transporting unit;

a dispensing slot for dispensing a predetermined number of discharged banknotes;

a slider member for pushing a predetermined number of discharged banknotes in the temporary storing section out of the temporary storing section to the dispensing slot so that the predetermined number of discharged banknotes protrude out of the dispensing slot;

a third sensor for detecting the presence of one or more dispensed banknotes, the third sensor outputting a third signal to indicate the presence of one or more banknotes adjacent to the third sensor, the third sensor being adjacent to the dispensing slot to detect the presence of one or more dispensed banknotes protruding out of the dispensing slot;

a fourth sensor for detecting the presence of a banknote adjacent the fourth sensor, the fourth sensor outputting a fourth signal to indicate successful passage of the received banknote through an intermediate position of the banknote transporting unit, the intermediate position being along the transporting path at a distance from the first sensor which is less than the length of an acceptable discharged banknote,

wherein the first signal and the fourth signal are passed to the control unit, the control unit interpreting the first signal and the fourth signal detecting and non-detecting states to determine the length of the transported discharged banknote, the control unit activating the diverting unit to the non-diverting position when the discharged banknote length is within predetermined acceptable parameters, and

wherein the banknote transporting unit includes a guiding unit for extending the travel path in a non-planar manner between the first and the fourth sensors to enable the banknote to be accurately measured while reducing the longitudinal length of the dispensing device.

21. (New) The compact banknote dispensing device of Claim 1 further comprising:

a fourth sensor for detecting the presence of a banknote adjacent the fourth sensor, the fourth sensor outputting a fourth signal to indicate successful passage of the received banknote through an intermediate position of the banknote transporting unit, the intermediate
5 position being along the transporting path at a distance from the first sensor which is less than the length of an acceptable discharged banknote.

22. (New) The compact banknote dispensing device of Claim 20 further comprising:

a temporary storing section for receiving a predetermined number of discharged banknotes, the temporary storing section being arranged adjacent to the banknote transporting unit,

5 wherein the second sensor is interposed between the banknote transporting unit and the temporary storing section to detect the passage of the discharged banknote into the temporary storing section.

23. (New) The compact banknote dispensing device of Claim 20, further comprising:

a fifth sensor for detecting the presence of a banknote adjacent the fifth sensor, the fifth sensor outputting a fifth signal to indicate successful passage of the received banknote to the rejected banknote storing section.

24. (New) The compact banknote dispensing device of Claim 20,

wherein the banknote storing section and the rejected banknote storing section comprise a removable safe unit.

25. (New) A compact banknote dispensing device, comprising:

a banknote supply storing section for storing one or more banknotes;

a banknote discharging unit for discharging a banknote from the banknote supply storing section at a first predetermined speed, the banknote discharging unit being adjacent to the banknote supply storing section;

a banknote transporting unit for receiving a discharged banknote from the banknote discharging unit and transporting the discharged banknote at a second predetermined speed from the banknote supply storing section, the second predetermined speed being faster than the first predetermined speed,

wherein the banknote transporting unit includes a first roller and a first pressing roller disposed adjacent to the banknote supply storing section, the first roller and the first pressing roller rotating oppositely and being arranged so their axes of rotation are parallel to each other to conduct a discharged banknote between the first roller and the first pressing roller in a direction away from the banknote discharging unit, the first roller and first pressing roller having multiple radial projections on the peripheral surface of each roller with one or more intermediate radial projection free portions, the radial projections on the first roller being interposed with the radial projections of the first pressing roller to enable the first roller and the first pressing roller to retain and conduct a discharged banknote in a wave-like manner;

a rejected banknote storing section adjacent to the banknote transporting unit;

a diverting unit for diverting a banknote from a first path to a second path, the first path being the normal banknote discharge path, the second path being the rejected banknote storage path; and

a first sensor for detecting the presence of a banknote received by the banknote transporting unit, the first sensor outputting a first signal to indicate the presence of the banknote adjacent to the first sensor;

a second sensor for detecting the presence of a banknote discharged by the banknote transporting unit, the second sensor outputting a second signal to indicate the presence of the banknote adjacent to the second sensor;

a control unit for receiving and processing the first signal and the second signal, the control unit comparing the first signal with the second signal to determine whether a banknote has successfully passed through the banknote transporting unit;

a dispensing slot for dispensing a predetermined number of discharged banknotes;

a third sensor for detecting the presence of one or more dispensed banknotes, the third sensor outputting a third signal to indicate the presence of one or more banknotes adjacent to the third sensor, the third sensor being adjacent to the dispensing slot to detect the presence of one or more dispensed banknotes protruding out of the dispensing slot;

a fourth sensor for detecting the presence of a banknote adjacent the fourth sensor, the fourth sensor outputting a fourth signal to indicate successful passage of the received banknote through an intermediate position of the banknote transporting unit, the intermediate position being along the transporting path at a distance from the first sensor which is less than the length of an acceptable discharged banknote,

wherein the first signal and the fourth signal are passed to the control unit, the control unit interpreting the first signal and the fourth signal detecting and non-detecting states to determine the length of the transported discharged banknote, the control unit activating the

45 diverting unit to the non-diverting position when the discharged banknote length is within
predetermined acceptable parameters,

wherein the banknote transporting unit includes a guiding unit for extending the
travel path in a non-planar manner between the first and the fourth sensors to enable the
banknote to be accurately measured while reducing the longitudinal length of the dispensing

50 device, and

wherein the banknote storing section and the rejected banknote storing section
comprise a removable safe unit.